

30. The method of claim 27 further comprising adjusting the pass band characteristic of the patch antenna to reduce the need for filtering of a received signal having predetermined frequency characteristics.

REMARKS

Claims 1 through 6, 8 through 12, 22 through 28, and 30 are pending in this application. Claim 27 stands rejected under 35 USC § 102 as being anticipated by U.S. Patent No. 5,542,106 to Krenz et al. (hereinafter "*Krenz*"). Claims 1 through 4, 6, 8, 9, 11, 12, and 22 through 26 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 5,530,919 to Tsuru et al. (hereinafter "*Tsuru*") in view of *Krenz*. Claims 5 and 10 stand rejected under 35 USC § 103(a) as being unpatentable over *Tsuru* and *Krenz*, and further in view of U.S. Patent No. 6,134,420 to Flowerdew et al. (hereinafter "*Flowerdew*"). Claim 28 stands rejected under 35 USC § 103(a) as being unpatentable over *Krenz*. Claim 30 stands rejected under 35 USC § 103(a) as being unpatentable over *Krenz* and further in view of U.S. Patent No. 4,849,767 to Naitou (hereinafter "*Naitou*"). These rejections are respectfully traversed.

Rejections under 35 USC § 102

Claim 27 stands rejected under 35 USC § 102 as being anticipated by *Krenz*. In particular, it is alleged that *Krenz* discloses adjusting the impedance of a patch antenna utilizing an element analysis (reads finite element analysis, col. 3, lines 23-42, TABLES 1-3). This rejection is respectfully traversed.

Krenz fails to provide a prima facie reference for rejection of claim 27 under 35 USC § 102, at least for the reason that it fails to disclose the element of "performing a finite element analysis on a design of a patch antenna to determine an estimated output impedance." Nothing in *Krenz* discloses or teaches performing a finite element analysis. The word "finite" is not even used in the *Krenz* patent. Instead, the "element analysis" of *Krenz* is an analysis of shunt capacitances that are added electrically in series to the antenna by virtue of conductive plates 107, 109, and 113, not to "performing a finite element analysis on a design of a patch antenna to determine an estimated output impedance." *Krenz* thus teaches away from the present invention, because it

attempts to adjust the impedance of the antenna using shunt capacitances, instead of by design. Thus, *Krenz* fails as either an anticipating reference for claim 27 under 35 USC § 102, or as a reference for use in combination with any other reference for rejection of claim 27 under 35 USC § 103, because one of ordinary skill in the art would read *Krenz* as teaching that the impedance of the patch antenna must be adjusted using shunt capacitances, instead of by design. Withdrawal of the rejection of claim 27 and allowance is respectfully requested.

Rejections under 35 USC § 103

Claims 1 through 4, 6, 8, 9, 11, 12, and 22 through 26 stand rejected under 35 USC § 103(a) as being unpatentable over *Tsuru* in view of *Krenz*. Claims 5 and 10 stand rejected under 35 USC § 103(a) as being unpatentable over *Tsuru* and *Krenz*, and further in view of *Flowerdew*. Claim 28 stands rejected under 35 USC § 103(a) as being unpatentable over *Krenz*. Claim 30 stands rejected under 35 USC § 103(a) as being unpatentable over *Krenz* and further in view of *Naitou*. These rejections are respectfully traversed.

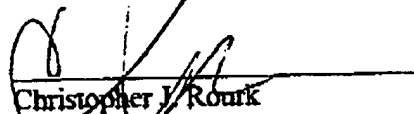
All of the rejections under 35 USC § 103(a) include a combination with *Krenz*. As previously noted, *Krenz* fails as a reference for use in combination with any other reference for rejection of claims 1 through 6, 8 through 12, 22 through 26, and 28 through 30 under 35 USC § 103, because one of ordinary skill in the art would read *Krenz* as teaching that the impedance of the patch antenna must be adjusted using shunt capacitances, instead of by design. Furthermore, to the extent that none of *Tsuru*, *Flowerdew*, or *Naitou* disclose or teach that "the impedance of the antenna [can be] determined by performing a finite element analysis on a design of the antenna to determine an estimated output impedance, and adjusting the antenna if the estimated output impedance does not approximately match the transmitter amplifier output impedance," and do not suggest a combination with another reference, any reference that merely teaches that an antenna can be designed using finite element analysis will not provide a suitable reference for combination with *Tsuru*, *Flowerdew*, or *Naitou*. Withdrawal of the rejection of claims 1 through 6, 8 through 12, 22 through 26, 28 and 30 and allowance of those claims is therefore respectfully requested.

Conclusion

The Applicants have made a diligent effort to advance the prosecution of this application, and respectfully submit that the rejection of all pending claims has been overcome and request that the rejections be withdrawn. The Examiner is invited to contact the Attorney for the Applicants at the telephone number provided below if further explanation of the Applicants' position would help to advance the prosecution of the application.

No fee is believed due with this Response. If any required fee has been overlooked, the Commissioner of Patents and Trademarks is hereby authorized to charge any fee deficiency or to credit any fee overpayment relating to this matter to Deposit Account No. 01-0657.

Respectfully submitted,


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